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Application No. 10/564,553
Attorney Docket No. 0837/0192PUS1
Response to Final Office Action dated 1 May 2008
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SEP 02 2008

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method for ~~controlling~~ calculating a distance in which a crane is stopped, the method comprising:

giving velocity requests as control sequences from a crane control system to crane drives and reading and storing the velocity requests (V_{ref}) in a control system, ~~whereby~~

each velocity request (V_{ref}) is compared with the previous velocity request and, if the velocity request is changed, an acceleration sequence for the corresponding velocity change is formed and stored, after which,

summing the velocity changes defined by stored acceleration sequences after a given time interval and adding the obtained sum (dV) to the previous velocity request to achieve a new velocity request (V_{ref2}), which is set as a new control and velocity request for the crane drives, and

performing some of the velocity changes defined by the summed acceleration sequences at a definition time of each acceleration sequence and performing the rest of them as delayed,

defining, at each any given time, ~~the~~ a distance (s) the crane moves before stopping and without swinging of the load fastened to it by summing up the following calculations:

a) stopping distance (s_1), which is calculated on the basis of, ~~an internal target velocity~~ ~~i.e. the~~ a velocity at which the control of an algorithm implementing this ends, when ~~(after)~~ the stored velocity changes are entirely implemented, by using a selected deceleration ramp, and

b) a second distance (s_2), which is calculated on the basis of stored velocity change requests stated before a stopping decision, and on the basis of remaining performance times.

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2. (Currently Amended) A method as claimed in claim 1, wherein when decelerating a target velocity of point a), a third distance (s3) caused by preventing the load from swinging, calculated on the basis of the part of the velocity control that differs from the deceleration ramp and being travelled by the crane when the swinging of the load caused by the actual deceleration ramp is damped with this differing velocity control is added to the calculation result.

3. (Currently Amended) A method as claimed in claim 1, ~~wherein~~ further comprising placing the ~~storages~~ stored velocity changes in a two-element table, whereby the velocity change which is to be carried out after a certain oscillation time is stored in the first element and the time, after which the velocity change or changes of the first element are carried out, is stored in the second element.